ABSTRACT OF THE DISCLOSURE

Several methods and production facilities are provided in order to solve several problems encountered in conventional methods and facilities for producing reduced iron by reducing raw material pellets of a mixture of an iron oxide powder and a reducing material powder in a rotary bed-type reducing furnace and by melting the reduced iron in a sealed-type electro-blast furnace.

Re-oxidation of reduced pellets of the mixture pellets is prevented by introducing into a rotary bed-type reducing furnace a reduced gas generated in an electro-blast furnace. In addition, an improved mechanical strength of reduced pellets after direct reduction is attained by applying rolling action to the reduced pellets.

A few method and facilities are provided for reliable utilization of wet mixture pellets and a preferable compositions of binders for forming the raw material mixture are selected. A novel charging device for charging raw material pellets is developed which is capable of charging the pellets on the rotary bed as a uniform layer formed by piling one or more pellets.